REMARKS

By an Office Action dated November 19, 2003 in the file of the above-identified application, the Examiner rejected the claims of this application based on two prior art rejections. By this submission, a reconsideration of the merits of that final rejection is respectfully requested. A petition for extension of time and request for continued examination (RCE) are submitted herewith, so this response will be considered as timely filed and so that this application will be reconsidered on the merits.

As a preliminary matter, the applicant draws the Examiner's attention to the Revocation of Power of Attorney and Appointment of Power of Attorney, in favor of the undersigned, enclosed herewith for entry into the file of this application. A copy of the relevant assignment documents to the present owner of the application is included with that document. Accordingly, the Patent and Trademark Office is requested to direct all further communications to the attention of the undersigned.

It is the assertion of the applicant that the two grounds of rejection against the claims of this application in the last Office Action are improper. Reconsideration of these rejections in view of the comments contained herein is respectfully requested.

The applicant believes that the US Patent No. 6,375,903 to Cerrina et al. cannot be used as a reference against the claims of this application under the provisions of 35 U.S.C. §102(e). The reason for this is based on the affidavit under Rule 131 (37 C.F.R. §1.131) already submitted in the file of this application. The Examiner has considered this affidavit and has refused to withdraw the rejection based on it. The applicant believes the Examiner is misinterpreting the situation. A 131 affidavit is appropriate to "swear ahead" of a reference under 35 U.S.C. §102(e). It specifically cites §102(e) in the text of 37 C.F.R. §1.131 as the type of reference for which the declaration is effectice. The only instance in which a 131 affidavit is in appropriate is the situation where the earlier filed patent claims the same invention, in which case the prior patent is alleged to be prior art under 102(g). That is not the case here since the '903 patent to Cerrina does not claim the same invention as this patent application.

The Examiner has required that the applicant make a showing under Rule 608 (37 C.F.R. §1.608) in order to avoid the rejection on the Cerrina patent. However, this requirement is inappropriate and, in fact, the applicant cannot make a showing under 608 in connection with this particular patent. The reason is simple. The invention claimed in Cerrina U.S. Patent No. 6,375,903 is patentably distinct from, and very different from, the

invention claimed in this patent application. The applicant has no intention of, and could not support, an interference against the claims of the '903 patent to Cerrina.

The distinction between the invention claimed here and that claimed in the '903 Cerrina patent is straightforward. In each of the claims of the Cerrina patent, it is explicitly required that the optics of the system are constructed with mirrors rather than with lenses. Mirrors are reflective optical elements while lenses operate by refraction. The relevant limitation appears in element (c)(3) of Claim 1. This limitation recites the light is directed form the micromirrors to the reaction chamber "by reflective optical elements," or, in other words, by mirrors not lenses. Note that in all the embodiments of the present patent application that the instrument is designed with lenses between the micromirror and the reaction chamber. See the lenses at 22 in Fig. 1 and Fig. 3 of the drawings in this file. Thus the specification of the present invention cannot support the claims of the Cerrina '906 patent. It is submitted that an instrument which includes the limitation that the optics between the micromirror and the reaction chamber is a separate and distinct invention from claims to a similar instrument without that limitation.

It is believed by the applicant that the instrument claimed by Cerrina is patentably distinct from the instrument as claimed in this application. Cerrina claims a species of the generic instrument of this type, and that species requires the use of mirrors rather than lenses between the micromirrors and the reaction chamber, a concept not found in this patent application. The '906 patent to Ceriina et al. claims a different invention than that claimed here.

That is not to say that there is not an appropriate patent application pending by Cerrina that should be in an interference with the claims of this application. In fact, the applicant believes there are as many as four parties which may be pursuing interfering subject matter at the Patent and Trademark Office. It is believed by the applicant here that the applicant of the '906 Cerrina patent has at least one co-pending continuation or divisional application which essentially claim the same subject matter as claimed in this application, or at least claim subject matter not patentably distinct from what is claimed here. Note that this continuation or divisional patent application is yet issued as a patent, and thus a showing under Rule 608 is not required to declare an interference with this pending application.

It is believed that the present patent application may not be patentably distinct from the methods and apparatus described in US patents number 6,241,957 and 6,480,324 to Quate and assigned to Affimetrix, Inc. It is believed that by the applicant however that the most senior priority date claimed by the aforementioned Quate patents, May 29, 1998, is not three

months before the filing date of this application. Thus the situation with regard to the Quate patents is controlled by 37 C.F.R. §608(a). The applicant's attorney of record hereby states that there is a basis on which to believe that the applicant here is entitled to judgment relative to the patentee of the two Quate patents identified above. Accordingly it is believed for this purpose that the requirements of Rule 608(a) are met.

Lastly, the applicant is aware of the existence of US Patent No. 6,426,184 to Gao et al. This patent also claims priority to an application filed in February of 1998. Again, however, like the Cerrina patent above, the applicant believes that this patent is patentably distinct from the claims of this and its co-pending application 09/998,341. The reason is that the issued '184 Gao patent includes in its claims a limitation not found within the specification of the present patent application and patentably distinct from it. In particular, in each of the claims of the Gao patent, it is explicitly required that a photo reagent precursor be included in the method the precursor "selected from the group consisting of acid and base precursors." This limitation appears in method step (a) in Claim 1, which is the only independent claim in the application. As taught in the Gao specification, it is possible to direct light to a reaction chamber and have in the reaction chamber a precursor reagent which is converted by the light into an acid or base. That acid or base then acts on the protective reagents at the end of building nucleic acids be a catalytic reaction. The present application does not disclose such an acid or base precursor and does not claims such a strategy. In the methods described in the present patent application, the light acts directly on a growing nucleotide polymer attached to the substrate, without the creation of an intermediate acid or base precursor.

Accordingly, the rejection of the claim of the present application over Cerrina et al. is respectfully traversed since the previously file affidavit under Rule 131 is sufficient to remove this patent as a reference under 102(e) against the claims of this patent application.

There is one other rejection in the Office Action. All the claims of the application are rejected under section 103 based on a combination of references to Goldberg et al. and Sweatt et al. While the previous claims are still believed patentable over this combination of references, the applicant here has made an amendment to claims 39 and 48 to distinguish this combination. Note the these claims now recited that the light is ultraviolet or UV light.

The significance of this recitation is that the DLP light processing micromirror device at the heart of the instrument of the present invention is intended to be a visible light device. Note the discussion in the specification beginning on page 11, line 13. The Texas Instrument DLP is designed and optimized to work in the visible spectrum. The catalytic reactions that

the applicant here desired to perform require light in the ultraviolet. It was not obvious that the instrument would function using ultraviolet light with a key component being one that was designed to work only with visible light. Note that ultraviolet light is inherently more energetic that visible light and one could not be sure that UV light would not destroy the micromirror device by overheating. In short, the success of the present instrument could not be predicted by the cited prior art. Note that the Goldberg et al patent specifically envisions the use of UV light (Column 17, line 15, column 18, line 8). Sweatt et al does not specify a source of the micromirrors used in the specification, but the only source of the DLP devices specified in the present specification sell only DLP devices designed for the visible light spectrum The fact that these devices work in the ultraviolet spectrum is simply not predictable from the cited prior art.

A terminal disclaimer over previously issued U.S. Patent 6,295,153 is submitted herewith to overcome the obviousness-type double patent rejection in the Office Action.

Accordingly, the applicant believes that this response overcomes the existing rejections. The Office can then consider whether it is appropriate that these claims be placed in interference against one or more of the co-pending applications to the parties mentioned above.

Respectfully submitted,

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